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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/058,830	01/30/2002	Nir Cohen	021756-038500US	2428

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EXAMINER	
NGUYEN, TAN D	

ART UNIT	PAPER NUMBER
3689	

MAIL DATE	DELIVERY MODE
07/23/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/058,830	COHEN ET AL.	
	Examiner	Art Unit	
	Tan Dean D. Nguyen	3689	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 April 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3,5-7 and 9-11* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3,5-7 and 9-11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 4/14/09 has been entered.

Response to Amendment

2. The amendment of 4/14/09 has been entered.

Claim Status

3. Claims 1-3, 5-7 and 9-11 are pending. Claims 4, 8 and 12-14 have been canceled. Current pending claims comprise 3 independent claims sets:

1) Method[1]: 1-3,

2) System[1]: 5-7 and

3) Method[2]: 9-11.

Claim Rejections - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

1. **Claims 1-3, 9-11** (method) are rejected under 35 U.S.C. 101. Based on Supreme Court precedent and recent Federal Circuit decisions, the Office's guidance to an examiner is that a § 101 process must (1) be tied to a particular machine or apparatus

or (2) transform underlying subject matter (such as an article or materials) to a different state or thing. Diamond v. Diehr, 450 U.S. 175, 184 (1981); Parker v. Flook, 437 U.S. 584, 588 n.9 (1978); Gottschalk v. Benson, 409 U.S. 63, 70 (1972); Cochrane v. Deener, 94 U.S. 780, 787-88 (1876).

To qualify as a § 101 statutory process, the claim should recite the particular machine or apparatus to which it is tied, for example by identifying the machine or apparatus that accomplishes the method steps, or positively reciting the subject matter that is being transformed, for example by identifying the material that is being changed to a different state.

There are two corollaries to the machine-or-transformation test. First, a mere field-of-use limitation is generally insufficient to render an otherwise ineligible method claim patent-eligible. This means the machine or transformation must impose meaningful limits on the method claim's scope to pass the test. Second, insignificant extra-solution activity will not transform an unpatentable principle into a patentable process. This means reciting a specific machine or a particular transformation of a specific article in an insignificant step, such as data gathering or outputting, is not sufficient to pass the test.

Here, applicant's method steps fail the first prong of the new test because the claimed invention fails to set forth a particular machine that is specifically configured/programmed to carry out the claimed invention, i.e. "the computer servers determining ..., allocating ..., and executing the task....". Specifically, the Examiner asserts that the current claim language can be interpreted that the user, is performing

the claimed invention by inputting the last step into the computer server and manipulates the computer server.

Further, applicant's method steps fail the second prong of the test because there is no transformation of the data. It is asserted that the data has not been transformed into another state or into another object.

2. Claims 5-7 are rejected under 35 U.S.C. 101 because the claimed invention is directed to more than one class of statutory subject matter.

The independent claim 1 begin by discussing a system/apparatus, however claims 5, 6 and 7 respectively use language that is used in the claims of a method, i.e. in claim 5: "a computer manager that determines..., allocates ..., distributing the task..., and executing the task...", in claim 6, "computes the demand ...", and in claim 7, "further determines ..". A claim of this type is precluded by the express language of 35 USC 101 which is drafted so as to set forth the statutory classes of invention in the alternative only". See Ex parte Lyell (17 USPQ2d 1548).

Claim Rejections - 35 USC § 112

3. Claims 1-3, 5-7, and 9-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

1) In independent claims 1 and 9, the step of "for each task, distributing the task to a computer server (1) of the at least two computer servers and executing the task on the computer server", indicates that only one computer server is needed to carry out the

scope of the invention, therefore, it's not clear why the previous step requires "at least two computer servers", what is the other computer server used for?

2) Claims 5-7 are vague and indefinite since the claims use "method steps", as cited above, in an apparatus claims which make it vague and indefinite because it involves the manner of operating the structural elements. See IPXL Holdings. Va. Amazon.com (Fed. Circuit 2005) in which a system claim that includes a method step is invalid as indefinite.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein

were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 5-7 (system[1]), 1-3 (method1), and 9-11 (method[2]) are rejected under 35 U.S.C. 103(a) as being unpatentable over FONG et al in view of PRASANNA.

As for independent system claim 5, In a similar computer-implemented method for load (computing) sharing controller for optimizing resource utilization cost, **FONG et al** fairly teaches the concepts of analyzing a computation demand for each branch of the plurality of branches by determining a number of bottom level nodes comprising each branch {see Fig. 4, elements 44, 45 and 46 each with 2 bottom level nodes) and allocating the nodes among different parallel jobs/processing systems in order to perform efficient scheduling of the resources (computing processors or servers) {see col. 1, lines 14-67 "*...parallel computers...*", col. 2, lines 1-67}. Note on lines 45-51, FONG et al also teaches "load sharing" scheduling methodology to balance the load among the nodes and thereby reducing mean response time. Note also, on lines 55-63, FONG et al discloses the partition of the available resources across the different scheduling schemes in a way that meet objectives, maximizing all resource utilization, providing the best overall mean response time, and the optimal system throughput. FONG et al disclose a system to carry out the scope above with:

(a) at least two computer servers,

{see col. 1, lines 15-67 ".. . *In a massively parallel processing system, as well as in a network of* ***computers****, ...", "...****parallel computers****, ..."*

(b) a computer manager that determines a computation demand for each branch of the plurality of branches by determining a number of bottom level nodes comprising each branch {see Fig. 4, elements 44, 45 and 46 each with 2 bottom level nodes) and allocating the nodes among different parallel jobs/processing systems in order to perform efficient scheduling of the resources (computing processors or servers) {see col. 1, lines 14-67 "...*parallel computers*...", col. 2, lines 1-67}. Note on lines 45-51, FONG et al also teaches "load sharing" scheduling methodology to balance the load among the nodes and thereby reducing mean response time.

It appears that FONG et al fairly teaches the claimed invention except for the step of determining an expected computing time for each branch of the plurality of branches of the demand forecast tree.

In a similar multiprocessor scheduling and execution environment, **PRASANNA** discloses the multiprocessor scheduling and execution system with the step of determining an expected computing time for each branch of the plurality of branches of the demand forecast tree in order to obtain a processor schedule with higher efficiency such as faster execution or allows the two branches to be executed independently {see Figs. 3A-3B, 5A-5C, col. 1, lines 10-40, col. 2, lines 20-35, col. 7, lines 1-37, and especially col. 8, lines 20-67}. Therefore, Therefore, it would have been obvious to a

person having ordinary skill in the art (herein after as "PHOSITA") at the time of the invention was made to modify the teaching of FONG et al to include the teaching of PRASANNA as cited for the benefits of a processor schedule with higher efficiency such as faster execution or allows the two branches to be executed independently, see col. 8, lines 20-67.

As for dep. claims 6-7 (part of 5 above), which deal with the features of the task and computing availability of the servers, these are taught in FONG et al /PRASANNA as

As for independent method claims 1-3, which are the respective method claims to carry out the system claims 5-7 above, they are rejected for the same reasons set forth in the rejections of claims 5-7 above.

As for method claims 9-11, which appear to be the respective method claims to carry out the system claims 5-7 above, they are rejected for the same reasons set forth in the rejections of claims 5-7 above.

Response to Arguments

8. Applicant's arguments, see Amendment/Response, filed 4/14/09, with respect to all the previous rejections have been fully considered are are moot in view of the new ground of rejections which are caused by applicant's amendment of the claims.

9. No claims are allowed.

10. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through private PAIR only. For more information about the PAIR system, see http://pair-direct@uspto.gov. Should you have any questions on access to the private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll free).

11. For more information about the PAIR system, see http://portal.uspto.gov/external/portal/pair. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at **866.217.9197** (toll-free).

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Hand delivered responses should be brought to the
US Patent and Trademark Office Customer Service Window:
Randolph Building
401 Dulany Street
Alexandria, VA 22314.

12. In receiving an Office Action, it becomes apparent that certain documents are missing, e. g. copies of references, Forms PTO 1449, PTO-892, etc., requests for copies should be directed to Tech Center 3600 Customer Service at (571) 272-3600, or e-mail CustomerService3600@uspto.gov .

13. Any inquiry concerning the merits of the examination of the application should be directed to Dean Tan Nguyen at telephone number (571) 272-6806. My work schedule is normally Monday through Friday from 6:30 am - 4:00 pm. I am scheduled to be off every other Friday. Should I be unavailable during my normal working hours, my supervisor Janice Mooneyham can be reached at (571) 272-6805. The main FAX phone numbers for formal communications concerning this application are **(571) 273-8300**. My personal Fax is (571) 273-6806. Informal communications may be made, following a telephone call to the examiner, by an informal FAX number to be given.

/Tan Dean D. Nguyen/
Primary Examiner, Art Unit 3689